

1/2 016 UNCLASSIFIED PROCESSING DATE--13NOV70
TITLE--KINETICS OF CATION ADSORPTION FROM SOLUTIONS OF LOW CONCENTRATIONS
BY ANION EXCHANGERS BASED ON POLYETHYLENEPOLYAMINES -U-
AUTHOR--(051)-ASAMBADZE, G.D., KOPYLOVA, V.D., SALDADZE, K.M., GINTSBERG,
E.G., KOVARSKAYA, B.M.
COUNTRY OF INFO--USSR

SOURCE--ZH. FIZ. KHIM. 1970, 44(1), 257

DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--ANION EXCHANGE RESIN, COPPER, COBALT, NICKEL, CATION,
POLYETHYLENE, POLYAMINE, DIFFUSION COEFFICIENT

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1989/0473

STEP NO--UR/0076/70/044/001/0257/0257

CIRC ACCESSION NO--AP0107079

UNCLASSIFIED

2/2 016

UNCLASSIFIED

PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AP0107079

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE ADSORPTION OF CU PRIME2 POSITIVE, CO PRIME2 POSITIVE, OR NI PRIME2 POSITIVE CATIONS ON THE TITILE EXCHANGER BELOW 25DEGREES IS GOVERNED BY THE DIFFUSION RATE INTO THE EXCHANGER GRAINS. ABOVE 35DEGREES AND GREATER THAN OR EQUAL TO 0.001M CATION CONC. THE DIFFUSION INTO THE EXCHANGER GEL PARTICLES IS THE PREDOMINANT FACTOR. THE DIFFUSION COEFFS. ARE 4.57 TIMES 10 PRIME NEGATIVE9, 5.27 TIMES 10 PRIME NEGATIVE9, OR 6.4 TIMES 10 PRIME NEGATIVE9 CM PRIME2-SEC FOR CU PRIME2 POSITIVE, OR N PRIME2 POSITIVE, RESP.

UNCLASSIFIED

1/2 UIN UNCLASSIFIED PROCESSING DATE--20NOV70
TITLE--EFFECT OF THE ION COMPOSITION OF ANION EXCHANGERS ON THE ADSORPTION
OF CATIONS -U-
AUTHOR--(03)--KOPYLOVA, V.D., SALCAJZE, K.M., ASAMBADZE, G.D.
COUNTRY OF INFO--USSR
SOURCE--Zh. NEORG. KHIM. 1970, 15(4), 1074-9
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--ANION EXCHANGE RESIN, ADSORPTION, POLYETHYLENE, AMINE
DERIVATIVE/(U)AN31 ANION EXCHANGE RESIN, (U)EDE10P ANION EXCHANGE RESIN,
(U)ANZF ANION EXCHANGE RESIN, (U)AV16 ANION EXCHANGE RESIN
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--3004/2031 STEP NO--UR/0078/70/015/004/1074/1079
CIRC ACCESSION NO--AP0132288
UNCLASSIFIED

2/2 014 UNCLASSIFIED PROCESSING DATE--20NOV70
CIRC ACCESSION NO--AP0132288
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. EXPTS. WERE MADE ON POLYETHYLENE
POLYAMINE ANION EXCHANGERS AN-31, EDE-10P, AN-2F, AND AV-16. INCREASED
CONCN. OF THE HYDRATE FORM OF THE AMINO GROUPS IN THE EXCHANGERS CAUSES
INCREASED ADSORPTION OF CATIONS DUE TO THE EQUIL R SUB3 NH PRIME POSITIVE
PLUS HOH IN EQUILIBRIUM R SUB3 N, HOH PLUS H PRIME POSITIVE. FORMATION
OF COORDINATION COMPLEXES BETWEEN CATIONS AND AMINO GROUPS CAUSES A
MARKED DECREASE OF SOLN. PH.

UNCLASSIFIED

USSR

UDC 678.66.067

SALDADZE, K. M.

"Prospects of Development of Methods of Desalination and Purification of Water Using Polymer Materials"

Moscow, Plasticheskiye Massy, No 4, 1973, pp 78-80

Abstract: At present there are three areas of chemical technology which could possibly be applied to water purification: simple ion exchange including complexing and redox reactions; ion exchange resins across which a voltage is applied; and ultrafiltration techniques. For each technique are given such parameters as contaminants most and least efficiently removed, their concentration in the unpurified and purified water, capacity, and advantages and disadvantages. Special reference is made to salt as an impurity.

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1/2 025

UNCLASSIFIED

PROCESSING DATE--04DEC70

TITLE--INHIBITORS OF THE ACID CORROSION OF IRON STUDIED BY AN IMPEDANCE

METHOD -U-

AUTHOR--(03)-PODOBAYEV, N.I., DAVYDOVA, V.P., SALEM, R.R.

COUNTRY OF INFO--USSR

SOURCE--ZASHCH. METAL. 1970, 6(2), 235-6

DATE PUBLISHED-----70

SUBJECT AREAS--MATERIALS, MECH., IND., CIVIL AND MARINE ENGR

TOPIC TAGS--METAL CORROSION, IRON ALLOY, STEEL, CORROSION INHIBITOR,
HYDROCHLORIC ACID, ELECTRIC IMPEDANCE, ACID CORROSION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRA--3008/1046

STEP NO--UR/0365/70/006/002/0235/0236

CIRC ACCESSION NO--AP0138068

UNCLASSIFIED

2/2 025

UNCLASSIFIED

PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AP0138068

ABSTRACT/EXTRACT--(U) GP-O- ABSTRACT. THE ACTION OF ALDEHYDES, UNSATD. ALCS. AND P, S, AND N CONTG. COMPS. ON THE CORROSION OF ARMCO FE IN 1 AND 5N HCL AT 20 PLUS OR MINUS 1 DEGREE WAS STUDIED BY THE USE OF AN A.-C. BRIDGE (400 HZ), IN A 10 MV POTENTIAL RANGE. THE INVESTIGATIONS WERE CARRIED OUT IN H. THE RELATIVE CHANGES NC OF DIFFERENTIAL CAPACITIES C, DEFINED AS $NC = \frac{C_{SUBO} - C}{C_{SUBO}}$, WERE COMPARED WITH THE COEFFS. OF PROTECTIVE ACTION OF INHIBITORS, EXPRESSED BY $Z = \frac{100}{P_{SUBO} - P}$ WHERE P IS THE CORROSION RATE, AND THE SUFFIX O REFERS TO THE VALUES WIHTOUT USE OF THE INHIBITOR. THE COMPS. INVESTIGATED ARE ADSORBED BY THE METAL AND ITS C DECREASES WITHIN A WIDE POTENTIAL RANGE. THE MOST EFFECTIVE WERE 1,HEXYN, 3,OL AND DIPROPARGYL METHYLCYCLOHEXYLPHOSPHONATE. THE LOWEST EFFECTIVENESS WAS SHOWN BY THE S CONTG. COMPS. FACILITY: MOSK. PEDAGOG. INST. IM. LENINA, MOSCOW, USSR.

UNCLASSIFIED

Oncology

USSR

UDC 615.272.6:547.963.32].015:616-006-092.9

MATIYENKO, N. A., RONICHEVSKAYA, G. M., BELYAYEV, D. K.,
MARTYNOVA, R. P., and SALGANIK, R. I., Institute of Cytology and
Genetics, Siberian Department, Academy of Sciences USSR,
Novosibirsk

"Inhibitory Effect of Homologous Ribonucleic Acid on the Growth
of Spontaneous Tumors in Mice of the High-Cancer A and C₃H Lines"

Moscow, Patologicheskaya Fiziologiya i Eksperimental'naya
Terapiya, No 1, 1971, pp 45-47

Abstract: Deproteinized RNA from mice of the low-cancer C₅₇B1
line was injected subcutaneously into A and C₃H mice with
palpable mammary tumors. The antitumor effect of the preparation
was assessed from the differences in the weight of tumors in
control and experimental mice (the tumors were systematically
weighed in animals sacrificed 10, 20, 30, 40, 80, and 100 days
after the injection) and in the survival time of animals. Where-
as the weight of tumors in control mice increased rapidly for
the first 1 to 1-1/2 months and remained stable thereafter, it
was significantly lower (50 to 77%) in the experimental group at
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MATIYENKO, N. A., et al., Patologicheskaya Fiziologiya i Eksperimental'naya Terapiya, No 1, 1971, pp 45-47

all stages, especially during the first 2 months. The survival time of experimental animals was also markedly longer than that of controls. Injection of the RNA had no toxic effects, judging by the fact that the body weight of experimental and control animals was virtually the same at the end of the experiment.

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1/2 026
UNCLASSIFIED
TITLE--PHARMACOLOGICAL ACTIVITY AND TOXICITY OF NUCLEASES -U-
PROCESSING DATE--13NOV70
AUTHOR--(04)--LAPIK, A.S., GUBENKO, I.S., KURUCHKIN, L.I., SALGANIK, R.I.
COUNTRY OF INFO--USSR
SOURCE--FARMAKOL. TOKSIKOL. (MOSCOW) 1970, 33(2), 210-12
DATE PUBLISHED--70
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--RIBONUCLEASE, DNA, MOUSE, CAT, CENTRAL NERVOUS SYSTEM, DRUG
EFFECT
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1994/1165
STEP NO--UR/0390/70/033/002/0210/0212
CIRC ACCESSION NO--AP0115184
UNCLASSIFIED

2/2 026

CIRC ACCESSION NO--AP0115184

UNCLASSIFIED

PROCESSING DATE--13NOV70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. R NASE AND D NASE HAD LOW TOXICITY AND DID NOT AFFECT THE ARTERIAL PRESSURE, RESPIRATION, OR SMOOTH MUSCLE TONUS IN MICE OR CATS. NUCLEASES ADMINISTERED ONCE OR TWICE I.P. TO MICE AT 400 MG-KG HAD NO CYTOTOXIC OR MUTAGENIC ACTIVITY, AND D NASE REPEATEDLY ADMINISTERED I.V. AT 20 MG-KG DID NOT AFFECT THE CONTENT OR INTENSITY OF DNA SYNTHESIS IN CELL NUCLEI. TOXIC EFFECTS ON THE CENTRAL NERVOUS SYSTEM APPEARED ONLY WHEN LARGE DOSES (100 MG-KG OF D NASE AND R NASE WERE INJECTED DIRECTLY INTO THE BRAIN. NEITHER COMPD. ADMINISTERED 5 TIMES S. C. AT 50 MG-KG HAD ANY NOTICEABLE EMBRYOTOXIC EFFECT ON MICE. FACILITY: NOVOSIBIRSK. INST. ORG. KHIN, NOVOSIBIRSK, USSR.

UNCLASSIFIED

USSR

SAIGANIK, R. L., Moscow State University im. M. V. Lomonosov

"On a Fluctuation Mechanism of Destruction"

Leningrad, Fizika Tverdogo Tela, Vol 12, No 5, May 1970, pp 1336-1343

Abstract: The fluctuation breakdown of a tight polymer chain with respect to quantum effects and dissipation arising due to extremely irregular interaction with surrounding molecules is discussed. It is pointed out that there is practically no difference between the model of a polymer in which only molecules oriented along the direction of stretching are taken into account in calculating strength and the model of an acicular crystal with the bonding energy between particles in any one direction much greater than in other directions. This difference becomes substantial in considering intermolecular interaction that is extremely irregular in the case of a polymer, giving a dissipative character to intramolecular oscillations as opposed to a crystal of this type in which the weak interaction between spicules and planes may be considered to be potential on the average due to the ordering of the structure. The effect of 1/2

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SAIGANIK, R. L., Fizika Tverdogo Tela, Vol 12, No 5, May 1970, pp 1336-1343

dissipation in the polymer in the quantum region is considered on the average with the aid of fluctuation-dissipation theory. The oscillation spectrum and its dependence on the tightness of the chain are discussed in detail. It is shown that if the Debye temperature for longitudinal oscillations is considerably higher than the test temperature, the upper portion of the oscillation spectrum of a tight chain is generally not excited due to the smallness of the thermal energy as compared with the energy quanta of the corresponding oscillations. It is stated that it may be possible that the outwardly purely classical manifestation of a fluctuation mechanism of destruction which is observed is caused basically by the breakdown of sufficiently overstrained molecules, the higher frequency of longitudinal oscillations of which, and hence their Debye temperature, are lowered due to the state of their high tension, so much that the Debye temperature is less than the test temperature. Breakdowns of such over-stressed molecules determining strength then become classical.

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1/2 037
TITLE--ON THE FRACTURE KINETICS OF SOLIDS -U- UNCLASSIFIED PROCESSING DATE--23OCT70
AUTHOR--SALGANIK, R.L.
COUNTRY OF INFO--USSR
SOURCE--INTERNATIONAL JOURNAL OF FRACTURE MECHANICS, VOL. 6, MAR. 1970, P. 1-5
DATE PUBLISHED----MAR70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--POLYMER, ACTIVATION ENERGY, RUPTURE STRENGTH, FRACTURE STRENGTH
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--2000/0865 STEP NO--NE/0000/70/006/000/0001/0005
CIRC ACCESSION NO--AP0124528
UNCLASSIFIED

2/2 037

UNCLASSIFIED

PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0124528

ABSTRACT/EXTRACT--(U) GP-0-

ABSTRACT. CONSIDERATION OF A SIMPLE MODEL FOR THE INVESTIGATION OF THE KINETICS OF FRACTURE IN POLYMERS, WITH SPECIAL REFERENCE TO QUANTUM EFFECTS WHICH MAY OCCUR EVEN AT ROOM TEMPERATURE. THE MODEL IS DERIVED FROM AKINETIC CONCEPT OF STRENGTH, PUT FORWARD BY ZHURKOV ET AL. (1964), ACCORDING TO WHICH FRACTURE OF A GROSS SAMPLE IS CONTROLLED BY RUPTURE OF CHEMICAL BONDS BEING CAUSED BY THERMAL FLUCTUATIONS WHILE APPLIED STRESS PLAYS ONLY AN ACTIVATION ROLE BY REDUCING THE INHERENT ENERGY OF ACTIVATION. FACILITY:

UNCLASSIFIED

1/2 017
UNCLASSIFIED
TITLE--INVESTIGATION OF ACTIVE AND REPRESSED CHROMATIN IN BIRD LIVER AND
ERYTHROCYTE NUCLEI -U-
AUTHOR--(03)--SHABALINE, A.T., MOROZOVA, T.M., SALGANIK, R.I.
COUNTRY OF INFO--USSR
SOURCE--MOLEKULYARNAYA BIOLOGIYA, 1970, VOL 4, NR 3, PP 411-413
DATE PUBLISHED-----70
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--BIRD, LIVER, CHROMATIN, ERYTHROCYTE, RNA, CATALASE
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1998/0165
CIRC ACCESSION NO--AP0120865
STEP NO--UR/0463/70/004/003/0411/0413
UNCLASSIFIED

2/2 017

CIRC ACCESSION NO--AP0120865

UNCLASSIFIED

PROCESSING DATE--16OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE ACTIVE REPRESSED CHROMATIN RATIO IN THE NUCLEI OF ERYTHROCYTES AND LIVER CELLS OF BIRDS (GALLUS DOMESTICUS) WAS STUDIED. THE AVERAGE CHROMATIN CONTENT WAS ESTABLISHED TO BE 0.1-0.3PERCENT IN ERYTHROCYTES AND 26.3PERCENT IN LIVER. THE HIGH RNA CONTENT AND THE CONSIDERABLE INTENSITY OF ITS SYNTHESIS IN LIVER CHROMATIN, AS COMPARED TO ERYTHROCYTE CHROMATIN, CONFIRM THE CONCEPT ABOUT CONSIDERABLE REPRESSEDNESS OF ERYTHROCYTE GENOME. THE INTENSITY OF RNA SYNTHESIS AND ITS HIGH CONTENT IN THE REPRESSED CHROMATIN OF ERYTHROCYTES IS MUCH LOWER THAN IN THAT OF LIVER CELLS; THE DIFFERENCES IN THE ACTIVE CHROMATIN ARE LESS DRASTIC. IT WAS SHOWN THAT IN LIVER CELL NUCLEI OF BIRDS OF A STRAIN WITH LOW ERYTHROCYTE CATALASA ACTIVITY, THE ACTIV CHROMATIN CONTENT IS LOWER THAN IN LIVER CELL NUCLEI OF BIRDS WITH HIGH ERYTHROCYTE CATALASA ACTIVITY. FACILITY: INSTITUTE OF CYTOLOGY AND GENETICS, SIBERIAN BRANCH OF ACADEMY OF SCIENCES, USSR, NOVOSIBIRSK.

UNCLASSIFIED

Coatings

USSR

UDC 620.18:669.71

PORTNOY, K. I., LEVINSKIY, YU. V., SALIBEKOV, S. YE., EVOYCHENKOVA, L. V.,
and TREFILOV, B. P., Moscow

"Using the Titanium Nitride as a Diffusion Barrier in Nickel-Base Composite
Materials"

Moscow, Fizika i Khimiya Obrabotki Materialov, No 3, May/Jun 73, pp 122-126

Abstract: The aim of this work was to design a commercial unit for the continuous coating of tungsten and molybdenum wire with titanium nitride and to study the behavior of these wires in a nickel matrix. The unit employs a mixture of hydrogen and nitrogen which passes into the reaction vessel and is mixed with titanium chloride. Tungsten (molybdenum) wire is drawn through the reaction vessel while heated by an electric current passing through it. The titanium tetrachloride undergoes reduction on a heated wire surface, with a simultaneous formation of titanium nitride. The optimal coating temperature was 1100°C, with a deposition rate of 0.5 μ /sec. This method makes it possible to produce coatings 3-6 μ thick on wires 300 and 310 μ thick. Titanium nitride coatings of this thickness almost completely stopped the penetration of tungsten into nickel at 1200°C and molybdenum into nickel at 1100°C during a 100-hr exposure. The strength of tungsten and molybdenum wire with titanium nitride coatings after annealing in a nickel matrix at 1000-1200°C for 1, 10, 100 hours was considerably higher than that of a similar wire without the coating.

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Superalloys

USSR

UDC 546.78:620.172.2

CHUBAROV, V. H., LEVINSKIY, YU. V., SALIBEKOV, S. YE., TREFILOV, A. F., GRACHEV, L. V., RODIN, YE. M., LEVINSKAYA, M. KH., DVOYCHENKOVA, L. V., Moscow

"Heat-Resistant Composition Material Based on Nickel"

Kiev, Problemy Prochnosti, No 7, 1971, pp 100-104

Abstract: Results are presented from development of the VKM-1 composition material constructed on the basis of the heat-resistant ZhS6-K nickel alloy reinforced with tungsten wire. Data are presented from metallographic and micro-radiographic studies of the compatability of the matrix with the fiber indicating insignificant interaction of the ZhS6-K alloy with the tungsten even after holding for 100 hours at a temperature of 1,200° C.

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Acc. Nr.

AP0105531

Abstracting Service:
CHEMICAL ABST.

6-70

Ref. Code

4R0363

128186u Synthesis of rare-earth tantalates and study of their physicochemical properties. Portnoi, K. I.; Timofeeva, N. I.; Salihakou, S. S. (USSR). *Izv. Akad. Nauk SSSR, Neorg. Mater.* 1970, 6(2), 289-93 (Russ). By high-temp. firing of mixts. of rare earth oxides and Ta_2O_5 , $RTaO_4$, RTa_2O_7 , R_2TaO_7 (where R = rare earth element ranging from La to Lu, with the exception of Ce, Pm, and Y) were synthesized. The chem. compn., m.p., d., thermal expansion coeff., heat cond., microhardness, and chem. stability of these compds. were detd. The m.ps. range from 1730 to 2390°, with R_2TaO_7 being the refractory. All the synthesized compds. have a high chem. stability in concd. acids and in boiling H_2O . S. A. Mersol

ELB

REEL/FRAME
19880546

18

USSR

UDC 621.397.335(088.8)

VORONOV, A. V., SALIENKO, YE. A.

"Device for Synchronizing a Television Image"

USSR Author's Certificate No 215259, Filed 27 Mar 65, Published 16 Jan 70
(from RZh-Radiotekhnika, No 9, Sep 70, Abstract No 9G220P)

Translation: A device is proposed for synchronizing a television image containing a selector, a slave oscillator and frequency dividers. It is controlled by a signal transmitted once per frame; the signal has the shape of a packet of sinusoidal oscillations cut by spaces of line frequency. In order to decrease the image distortions caused by the doppler effect during transmissions from high speed targets, a phase detector which generates an error signal is connected between the selector and the slave oscillator. A ready-access memory element is connected to the phase detector for the time of formation of the error signal in order to store it.

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USSR

UDC 599.323.3: 577.95

SALIKHBAYEV, I. K., Institute of Zoology and Parasitology, Academy of Sciences Uzbek SSR (Tashkent)

"Stages in the Intrauterine Development of Severtzov's Jerboa (*Allactaga severtzovi*)"

Moscow, Zoologicheskii Zhurnal, Vol 51, No 3, 1972, pp 414-419

Abstract: The 13 stages of intrauterine development in the jerboa are described: six embryonic stages, five prefetal stages, and two fetal stages. A comparison of the development of Severtzov's jerboa with that of other animals shows that the six embryonic stages are similar. The prefetal stage begins with the seventh stage and is characterized by the following: The development of the cochlea, the appearance of vibrissae on the base of the muzzle and in the eyebrow region, an increased growth of the eyeball, and the appearance of rudimentary mammary glands. This stage lasts from about the 13th to the 18th day. The fetal period is characterized by a general increase in the embryo. The total gestation period is 20 to 21 days long. The embryonic and prefetal stages of development are similar to the analogous stages in the rat and the rabbit. However, the development of *Allactaga severtzovi*, in the late prefetal stage diverges from the development characteristic of the rat and rabbit.

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1/2 006 UNCLASSIFIED PROCESSING DATE--20NOV70
TITLE--UNIVERSAL ELECTRON POLAROGRAPH UPE 6124 -U-
AUTHOR-(02)-BRYKSIN, I.YE., SALIKHDZHANOVA, R.M.
COUNTRY OF INFO--USSR
SOURCE--ZAVCO. LAB. 1970, 36(3), 369-70
DATE PUBLISHED-----70
SUBJECT AREAS--PHYSICS
TOPIC TAGS--POLAROGRAPHY, POLAROGRAPHIC ANALYZER/(U)UPE6124 POLAROGRAPH
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--2000/1260 STEP NO--UR/0032/70/036/003/0369/0370
CIRC ACCESSION NO--AP0124911
UNCLASSIFIED

2/2 006

UNCLASSIFIED

PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AP0124911

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE POLAROGRAPH MAY BE USED FOR THE USUAL POLAROGRAPHY, OSCILLO POLAROGRAPHY, AND FOR THE METHODS USING STATIONARY ELECTRODES OR METHODS USING THE 3 ELECTRODE SYSTEM. IT HAS THE FOLLOWING CHARACTERISTICS. APPLIED VOLTAGE FROM PLUS 3 TO MINUS 3 V (PLUS OR MINUS 2 MV), LINEAR VOLTAGE REGULATION OF 2.5, 5, 10, 20, 40, 50, 100, 200, 400, 500, AND 1000 MV-SEC (PLUS OR MINUS 2PERCENT), AND SENSITIVITY 0.1-3000 MU A. THE BLOCK SCHEMATIC DIAGRAM IS GIVEN.
FACILITY: VNII AVTOMAT. CHERN. MET., USSR.

UNCLASSIFIED

USSR

~~SALIKHODZHAYEV, S. S.~~ and GOL'YEVA, I. V., Candidates of Medical Sciences Uzbek Scientific Research Institute of Sanitation, Hygiene and Occupational Diseases

"Labor Hygiene Problems and the State of LOR [Otorhinoaryngological] organs of Workers Employed in Mining and Enrichment of Tungsten and Its Compounds"

Tashkent, Meditsinskiy Zhurnal Uzbekistana, No 7, Jul 70, pp 8-11

Abstract: To determine the effects of exposure to tungsten on the upper respiratory tract, 592 tungsten mine workers and 120 enrichment plant workers were examined. The mine personnel were divided into three groups, a basic group of 412 underground miners, an auxiliary group of 105 men working underground but not in mining, and a third group of 75 other workers who were occasionally exposed to dust. The 120 men working in the enrichment plant were similarly divided into three groups based on exposure to the dust. Objective examination of these workers showed that the enrichment plant group had a higher proportion of workers with upper respiratory defects than the mining group, probably owing to the technology of enrichment and the content of tungsten in the dust. The mining group showed a direct relationship between length of service and degree of disorders, a phenomenon not observed in the enrichment group. The basic groups had the highest number of ailments. Pathological examinations indicated attacks on the mucous membrane of the upper respiratory tract, chronic tonsillitis, laryngitis, and defective hearing

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USSR

UDC 512.25/.26+519.3:330.115

SALIKHOV, Z. M., PAYZIYEV, E., BURKOV, V. N., KANTSEL'SON, M. B.

"Combined Algorithm for Solution of the Transport Problem"

Vopr. Kibernet. i Vychisl. Mat. [Problems of Cybernetics and Computer Mathematics
-- Collection of Works], No 40, Tashkent, 1970, pp 23-29, (Translated from
Referativnyy Zhurnal, Kibernetika, No 6, 1971, Abstract No 6 V507).

NO ABSTRACT.

USSR

UDC 582.288:616.9-098:581.12:633.51

~~SALIKHOVA, B. S.~~, BORODIN, G. I., RUNOV, V. I., and CHEPENKO, L. I.,
Microbiology Division, Academy of Sciences Uzbek SSR

"The Effect of the Toxic Compounds of Verticillium dahliae Mycelium on
Gas Exchange in Cotton Leaves"

Tashkent, Uzbekskiy Biologicheskii Zhurnal, No 5, 1970, pp 28-31

Abstract: The mycelium and culture fluid of V. dahliae contain a group of toxic substances that appear to play a major role in the wilting of cotton plants. When these substances are applied to the plants, the leaves show signs of Verticillium wilt (loss of turgor; appearance and luminescence of yellow spots), suggesting that the mechanism of action of the toxic substances produces changes in the chloroplasts and, consequently, in the gas exchange of the leaves. Changes in the intensity of respiration and photosynthesis in cotton leaves following application of the toxic substance of V. dahliae (yellow pigment) were studied using a gas analyzer. The yellow pigment markedly increased respiration, which reached a peak after 20 hours. Exposure of the leaves to light or addition of ADP or NAD resulted in secondary activation of respiration. After 72 hours the rate of respiration decreased; after 96 hours it was below that of the controls.

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USSR

SALIKHOVA, B. S., et al, Uzbekskiy Biologicheskiy Zhurnal, No 5, 1970,
pp 28-31

Photosynthesis was simultaneously suppressed. The yellow pigment impaired the regulatory mechanism of the cells by disrupting phosphorylation in the mitochondria and chloroplasts. Thus, cotton plants affected with Verticillium wilt are apparently killed as a result of impairment of gas exchange in the leaves.

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1/2 021

UNCLASSIFIED

PROCESSING DATE--04DEC70

TITLE--ISOLATING TOXIC SUBSTANCES FROM VERTICILLIUM DAHLIAE -U-

AUTHOR--(04)--CHEPENKO, L.I., SALIKHOVA, B.S., BORODIN, G.I., RUNOV, V.I.

COUNTRY OF INFO--USSR

SOURCE--UZB. BIOL. ZH. 1970, 14(2), 71-2

DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--PROCESSED PLANT PRODUCT, PLANT TOXIN, FILTRATION,
CENTRIFUGATION, ELECTROPHORESIS, PAPER CHROMATOGRAPHY, THIN LAYER
CHROMATOGRAPHY, BIOLOGIC PIGMENT

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3008/0018

STEP NO--UR/9079/70/014/002/0071/0072

CIRC ACCESSION NO--AP0137217

UNCLASSIFIED

2/2 021

UNCLASSIFIED

PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AP0137217

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. TWO METHODS WERE USED TO EXT. TOXIC SUBSTANCES FROM V. DAHLIAE IN AMTS. SUFFICIENT FOR ANAL. (1) V. DAHLIAE MYCELIA WERE HOMOGENIZED REPEATEDLY IN DISTD. WATER AND FILTERED. AFTER SATN. WITH (NH SUB4) SUB2 SO SUB4, THE FILTRATE AND CULTURE FLUID WERE EXT. WITH BENZYL ALC. (2) AQ. EXTS. OF MYCELIA AND CULTURE FLUID WERE MIXED WITH NACL AND EXT. SEVERAL TIMES WITH PHOH-CHCL SUB3 (1:1). IN EACH CASE, AFTER ADDN. OF 3 VOLS. OF ET SUB2 O, THE ORG. PHASE WAS EXT. WITH WATER. THE AQ. EXTS. WERE CONCD. AT ROOM TEMP., AND ANY EMULSION WAS REMOVED BY FILTRATION OR CENTRIFUGATION. THE ISOLATED SUBSTANCES WERE SEPD. BY HORIZONTAL PAPER ELECTROPHORESIS INTO YELLOW AND RED PIGMENTS AND SUBSTANCES WHICH FLUORESCED IN UV LIGHT. PAPER, THIN LAYER, AND DEAE-CELLULOSE CHROMATOG. REVEALED 2 YELLOW, 3 RED, AND 3 FLUORESCENT COMPONENTS. SPECTRAL ANAL. WAS ALSO PERFORMED IN THE UV AND VISIBLE REGIONS. BOTH EXTN. PROCEDURES YIELDED THE SAME GROUPS OF TOXIC SUBSTANCES, IN PURER FORM AND IN SHORTER TIME THAN WAS PREVIOUSLY POSSIBLE. THE PHOH-CHCL SUB3 METHOD IS PREFERRED SINCE LESS EMULSION FORMS.

UNCLASSIFIED

USSR

UDC 629.73.017.2

KOLPAKOVA, N. P., SALIKOV, L. M., and YAGODIN, V. M.

"Investigation of the Parametric Invariancy of up to 8 Pulsed Systems of Automatic Control"

Tr. Mosk. Aviats. In-ta (Works of the Moscow Aviation Institute), No 240, 1972, pp 134-139 (from Referativnyy Zhurnal--Paketostroyeniye, No 5, May 73, Abstract No 5.41.142 by the authors)

Abstract: Pulsed systems of automatic control (ISAC) are being more widely used in different fields of engineering. Parameters of the control object and system of control, owing to structural, technological and other conditions, may deviate from calculated values which leads to a change in the dynamic properties of the system. The problem of parametric invariancy is involved in the independence of the motion of ISAC and their dynamic properties to variations of control object and control system parameters. The theory of invariancy in linear systems was developed in the works of B. N. Petrov, G. V. SHIPANOV, And N. N. LUZH. An algorithm is proposed in this work for plotting the region of parametric invariancy in the amplitude of the parameters of pulse-width modulation modulators of ISAC. 9 figures, 3 bibliographic references.

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USSR

SALIKOV, Sh. I.

UDC 681.327.21:621.317.785

"The Principle of the Automatic Input of Actual Readings of Electrical Energy in the 'Dnepr-1' General Purpose Computer"

V sb. Vopr. kibernetiki (Problems of Cybernetics -- Collection of Works), No 49, Tashkent, 1972, pp 133-138 (from RZh-Avtomatika, telemekhanika i vychislitel'naya tekhnika, No 11, Nov 72, Abstract No 11B418)

Translation: A method is developed for calculating the expenditure of electrical energy from a three-phase electrical counter with a pulse pickup using the "Dnepr-1" control digital computer. An additional 10-bit counter for electrical energy was developed which is made up of standard elements of the "Dnepr-1" computer. Input to the "Dnepr-1" computer of the electrical energy counter is achieved through a new command 210,014 A in two modes: by the operation from the computer control panel, and automatically through an interruption in the program. 2 ill., 3 ref. Resume.

1/1

- 60 -

1/2 015
TITLE--GERMANIUM DISULFIDE SODIUM MONOSULFIDE WATER SYSTEM AT 25DEGREES
-U-
AUTHOR--(02)-SEVRYUKOV, N.N., SALIKOVA, G.E. S
COUNTRY OF INFO--USSR
SOURCE--ZH. NEORG. KHIM. 1970, 15(6), 1634-9
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--PHASE EQUILIBRIUM, TERNARY LIQUID SYSTEM, AQUEOUS SOLUTION,
CRYSTALLIZATION, SOLUBILITY, GERMANIUM SULFIDE, SODIUM SULFIDE
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--3006/1401 STEP NO--UR/0078/70/015/006/1634/1639
CIRC ACCESSION NO--AP0135075
UNCLASSIFIED

2/2 015
CIRC ACCESSION NO--AP0135075 UNCLASSIFIED
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE SOLY. OF GES SUB2 IN AQ.
SOLNS. OF NA SUB2 S WAS DETD. AND THE ISOTHERMAL (25DEGREES) SOLY.
DIAGRAM OF THE NA SUB2 S, GES SUB2, H SUB2 O IS CONSTRUCTED. THE SHSTEM
FORMS CONGRUENTLY SOL. CRYST. NA SUB2 S. 9H SUB2 O, NA SUB4 GES SUB4.15H
SUB2 O, NA SUB2 GES SUB3.10H SUB2 O, NA SUB2 GE SUB2 S SUB5.11H SUB2 O,
AND GES SUB2. THE COMPN. OF LIQ. IN THE SOLID PHASES OF THE SYSTEM AT
25DEGREES IS TABULATED.

PROCESSING DATE--27NOV70

UNCLASSIFIED

1/2 009 UNCLASSIFIED
TITLE--DETERMINATION OF GERMANIUM IN HARD COALS -U-
AUTHOR--(02)-SEVRYUKOV, N.N., SALIKOVA, G.E.
COUNTRY OF INFO--USSR
SOURCE--ZAVOD. LAB. 1970, 36(1) 25-7
DATE PUBLISHED-----70
SUBJECT AREAS--MATERIALS, EARTH SCIENCES AND OCEANOGRAPHY
TOPIC TAGS--COAL, GERMANIUM, CHEMICAL ANALYSIS/(U)IP120 ION EXCHANGE
RESIN, (U)ANZF ION EXCHANGE RESIN
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1983/1521
CIRC ACCESSION NO--AP0054372
STEP NO--UR/0032/70/036/001/0025/0027
UNCLASSIFIED

2/2 009

UNCLASSIFIED

PROCESSING DATE--18SEP70

CIRC ACCESSION NO--AP0054372

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE TIME AND TEMP. REQUIRED FOR CONVERSION OF GE IN COAL TO H SUB2 O SOL. NA SUB2 GES SUB3 BY FUSION WITH NA SUB2 SO SUB4 WERE DETD. TO DET. GE IN COAL, FUSE A MIXT. OF 2.0 G COAL AND 3 G ANHYD. NA SUB2 SO SUB4 1 HR AT 900DEGREES, LEACH WITH 15-20 ML H SUB2 O, FILTER THE SOLN. AND DIL. THE FILTRATE TO 100 ML. ADD 2 ML 30PERCENT H SUB2 O SUB2, BOIL THE SOLN. TO OXIDIZE THE FE, AND EVAP. THE SOLN. TO 10 ML, ADD 2-3 DROPS CONCD. HCL, COOL, AND PASS IT THROUGH A COLUMN CONTG. A MIXT. OF ION EXCHANGE RESINS AMBERLITE IP-120 (H FORM) 7 PARTS AND AN-2F (CL FORM) 3 PARTS. ADD 2 ML 12N HCL AND 1 ML 1PERCENT GELATIN AND THEN 1.5 ML OF A SOLN. OF 50 MG PHENYLFLUORONE IN 100 ML 96PERCENT ETOH AND 0.5 ML 6N HCL. DIL. THE SOLN. TO 25 ML AND, AFTER 30 MIN, DET. ITS ABSORBANCE WITH A GREEN FILTER.

UNCLASSIFIED

USSR

UDC: 6.74

SALIMOV, A. Kh., MASLOV, Yu. S., PLATONOV, I. N.

"Tie-in of the 'Konsul-254' Electric Printer for Alphanumeric Data Output"

V sb. Chisl. metody v tekhn.-ekon. zadachakh (Numerical Methods in Technical and Economic Problems--collection of works), Kazan', Kazan' University, 1971, pp 138-141 (from RZh-Kibernetika, No 1, Jan 72, Abstract No 1V966)

Translation: It is pointed out that in resolving and translating programs written in ALGOL-60 (or any other language) on the M-20 computer, the need arises for output of alphanumeric information. The construction of a device for matching the "Konsul-254" electric printer to the M-20 computer and some modifications in the M-20 are described. V. Alekperov.

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USSR

SALIMOV, R. B.

"Inverse Problem of Variation of a Hydrofoil"

Tr. Seminara po krayev. zadacham. Kazansk. un-t (Works of the Seminar on Boundary Problems. Kazan University), 1970, vyp. 7, pp 244-248 (from RZh-Mekhanika, No 11, Nov 70, Abstract No 11B572)

Translation: An approximate method of determining the shape of the profile of a hydrofoil by the velocity distribution given on it is proposed. The method is based on the exact G. G. Tumashev solution (G. G. Tumashev, M. T. Nuzhin, Obratnyye Krayevyye Zadachi i ikh Prilozheniya (Inverse Boundary Problems and their Applications), Kazan, Kazan University, 1965). The fluid is considered ideal, incompressible and weightless. The plane of the flow is mapped conformally onto a circular region. The three conditions of resolvability of this problem indicated by G. G. Tumashev are satisfied by a procedure which is convenient from the point of view of approximations. One of the conditions is satisfied by selecting the value (not given in advance) of the current function on the desired free boundary; the other two are satisfied by means of a simple procedure consisting in the fact that the given velocity distribution is assumed close

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USSR

SALIMOV, R. B., Tr. Seminara po krayev. zadacham. Kazansk. un-t (Works of the Seminar on Boundary Problems. Kazan University), 1970, vyp. 7, pp 244-248

to the velocity distribution along the known profile around which the same flow takes place as the desired profile.

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1/2 018 UNCLASSIFIED PROCESSING DATE--16OCT70
TITLE--EFFECT OF LOW FREQUENCY MECHANICAL VIBRATIONS ON THE EXTRACTION OF
VEGETABLE OILS -U-
AUTHOR--(04)--NIYAZOV, M.I., SALIMOV, Z., YUSUBOV, M., SHARIPOV, D.
COUNTRY OF INFO--USSR
SOURCE--UZB. KHIM. ZH. 1970, 14(1), 71-2
DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--VEGETABLE OIL, LOW FREQUENCY, VIBRATION, CHEMICAL SEPARATION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAHE--1999/0301

STEP NO--UR/0291/70/G14/001/0071/0072

CIRC ACCESSION NO--AP0122503

UNCLASSIFIED

2/2 018

UNCLASSIFIED

PROCESSING DATE--16OCT70

CIRC ACCESSION NO--AP0122503

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE EFFECT OF LOW FREQUENCY MECH. VIBRATION ON EXTN. OF COTTONSEED MEAL (8.78PERCENT OIL, 4.2PERCENT H SUB2 O) WAS INVESTIGATED. THE EXTN. COLUMN HAD DIMENSIONS: LENGTH (LAYER OF EXTRACTION MATERIAL) 340 MM; DIAM. 40 MM; VIBRATION AMPLITUDE 8 MM; FREQUENCY 3.5 HZ; AV. DIAM. OF EXT. PARTICLES 4 MM; TEMP. 20DEGREES; FLOW RATE OF SOLVENT 0.35-2.0 CM-SEC. A CONSIDERABLE INTENSIFICATION OF THE EXTN. PROCESS WAS ACHIEVED BY USE OF I IN COMPARISON WITH COMMON EXTN. PROCESS WITHOUT I UNDER THE SAME CONDITIONS. THE EFFECT OF I IS BASED MAINLY ON IMPROVEMENT OF EXTERNAL DIFFUSION. FACILITY: TASHKENT. POLITEKH. INST., TASHKENT, USSR.

UNCLASSIFIED

USSR

UDC 535.872

BEYNAROVICH, L. N., SALIMOVA, E. A., MARTYNOV, V. P.

"Manufacture of Large Mirrors of Polymers by the Copying Method"

Optiko-mekhanicheskaya Promyshlennost', No 10, 1971, pp 41-44.

BASTRACT: A method is described for manufacture of spherical mirrors 700 mm in diameter of a polyester resin, using silumin as a base. The cost of these mirrors is significantly lower than similar glass mirrors. The copying method used is quite straight forward, involving production of a master reversed shape by casting of polyester on an optical glass mirror, after which the reversed shape master is used to produce polyester mirrors of the proper shape. A photograph is presented of the casting table used for production of the mirrors.

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USSR

UDC 619:616.981.42-07:636.32.33

ABIDZHANOV, M. S., GRIN'KO, V. K., Candidates of Veterinary Sciences, ISTAMOV, I. I., and SALIMOVA, M., Junior Scientific Associates, Uzbek Scientific Research Veterinary Institute

"Investigation of Blood Serum of Sheep Vaccinated Against Brucellosis"

Moscow, Veterinariya, No 8, Aug 70, pp 47-48

Abstract: A study was made of shifts in the concentration of blood serum proteins in sheep vaccinated against brucellosis with various doses of the Nevskiy-12 and Nevskiy-19 strains. The problem was of particular interest because, even though the Nevskiy-12 vaccine produces immunity in animals, it does not induce the formation of antibodies which could be detected with standard antigens. Of a total of 21 sheep, six were immunized with a single dose of 40 billion bacteria of the Nevskiy-19 strain, and six with 40 billion bacteria of the Nevskiy-12 strain. Six other sheep were vaccinated twice with the Nevskiy-12 strain, the first dose containing 120 billion bacteria and the second, given 26 days later, containing 40 billion bacteria. Blood samples were collected and analyzed before vaccination and 1-140 days afterwards. Three sheep served as controls. The shifts induced by the Nevskiy-12 and Nevskiy-19 strains were similar: the concentrations of total protein and albumins decreased, while the concentrations of beta- and gamma-

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USSR

ABIDZHANOV, M. S., et al, Veterinariya, No 8, Aug 70, pp 47-48

globulins increased. In sheep which were vaccinated twice, the concentrations of total protein and gamma-globulins increased, while the concentrations of alpha- and beta-globulins decreased. No shifts were observed in the control animals.

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USSR

UDC 681.142:669.2

SALIN, A. A., and SYRGABAYEV, M. R.

"Using Computers to Determine the Optimal Conditions for Electrolysis of Zinc"

Alma-Ata, Vestnik Akademii Nauk Kazakhskoy SSR, No 6, Jun 71, pp 64-68

Abstract: The basic indices characterizing the electrolysis of zinc are the specific consumption of electric power and the power yield of zinc. The zinc power yield is influenced by the following parameters: (a) current density; (b) amount of oxygen; (c) electrolyte temperature; (d) amount of impurities in the electrolyte, including those artificially introduced; (e) duration of zinc accumulation; and (f) rate of circulation of the electrolyte. Considerable attention has been paid to seeking mathematical relationships between the parameters of the electrolysis process and the power yield, but all of the formulas obtained have had no practical application. The authors find a formula based on the concept that the precipitation of hydrogen and, consequently, the zinc power yield are basically associated with dissolving zinc in the electrolyte. Tables are used to show their findings. In addition to the semi-empirical formula for computing the

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USSR

SALIN, A. A., and SYRGABAYEV, M. R., Vestnik Akademii Nauk Kazakhskoy SSR, No 6, Jun 71, pp 64-68

power yield of zinc they also find an empirical formula for determining the voltage on the electrolytic zinc bath. They give an example of using computers for computing the optimal electrolysis conditions using these formulas. The article contains 4 tables and 8 bibliographic entries.

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UDC: 681.325.3

USSR

SALIN, O. A., ZHURAVIN, L. G. LITVINOV, V. I., KOSTROMIN, I. A., IL'IN, I. A.

"Variable Voltage Amplitude-Digital Code Converter"

USSR Authors' Certificate No 251957, Filed 5 May 1968, Published 30 January 1970 (Translated from Referativnyy Zhurnal Avtomatika, Telemekhanika i Vychislitel'naya Tekhnika, No 10, 1970, Abstract No 10B271P, by N. V.)

Translation: The converter suggested contains a null-balance device, one input of which is connected to the signal source, while the other is connected to a digital-analog converter connected to a source of standard voltage; a control circuit; distributor and counter, the output of which is connected to a digital-analog converter; and also an additional counter. The output of this last counter is connected to a digital-analog converter; the input, together with the input of the main counter, is connected through a distributor switched by the control circuit to the output of the null-balance device. This increases the speed of conversion. One illustration.

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USSR

UDC 621.385.6

KOROZA, V. I., MAYOROV, Yu. K., SALIN, R. A.

"The Problem of Spatial Harmonics and Partial Flows"

V sb. Uskoriteli (Accelerators -- Collection of Works), No 12, Moscow, Atomizdat, 1970, pp 205-207 (from RZh--Elektronika i yeye primeneniye, No 10, October 1970, Abstract No 10A21)

Translation: An analysis is conducted of equations in the general form for the flow of energy through a delaying system with a period D. It is possible to use the expressions obtained if a further determination is introduced. As a function of the method of extension of the field, the effect of the equation is extended, either at the space interaction only or at all the interior of the delaying system. 2 ref. V. A.

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USSR

UDC: 51:155.001.57:681.3.06

VORONIN, Yu. A., BOROVNIKOV, A. M., SALIN, Yu. S., SOLOV'YEV, V. A., BUR-KHANOV, Kh. Kh.

"On Computer Realization of Stratigraphic Constructions"

V sb. Mat. probl. geofiz. (Mathematical Problems of Geophysics--collection of works), vyp. 2, Novosibirsk, 1971, pp 295-304 (from RZh-Kibernetika, No 12, Dec 71, Abstract No 12V1027)

Translation: A procedure is given for computer realization of stratigraphic constructions which briefly reduces to the following: 1) with given classifications and enumerations of rocks and types, and a given method of separating lithomatter and biomatter, columns q_k are separated into one-dimensional lithobodies and biobodies, and a set of separated columns (q_k) is obtained in part of the geological space G' ; 2) a description of the (q_k) is given, specifically, a stratigraphic summary column is constructed for G' ; 3) on the basis of the resultant description of the (q_k), a hypothesis is adopted on the method of identifying columns q_k and a set of identified columns (q_k) in G' is obtained. The axioms and algorithms for primary description of the set of columns are considered. Bibliography of 17 titles. V. Mikheyev.
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(4)

USSR

FOMENKOV, V. N., STREKALOVA, E. Ye., KATOSOVA, L. D., CHIRKOVA, Ye. M.,
SAL'NIKOVA, L. S., SILANT'YEVA, I. V., YEFIMENKO, L. P., KULAKOV, A. Ye.

"Experimental Data on Adaptation and Its Limits in the Action of Poisons
Having a Mutagenic and Embryotropic Action"

Sb. Farmakol, Khimioterapevt. sredstva. Toksikol. Probl. toksikol.
(Pharmacology of Chemically Therapeutic Substances. Toxicology. Problems
in Toxicology--Collected Works), T. 5 (Itogi nauki i tekhn. VINITI AN
SSSR - Results in Science and Technology of the All-Union Institute of
Scientific and Technical Information, Academy of Sciences, USSR), 1973,
pp 128-145) (from Referativnyy Zhurnal, 30F, Biologicheskaya Khimiya,
No 18, 25 September 1973, abstract No 1754)

Translation: The dependence of the development of a cytogenetic and embryo-
tropic effect on long-term exposure was studied in an example of the action
of different groups of chemicals: chlorine releasing substances, phenoxy-
acetic acid esters, triazines, carbamates, epoxy compounds, imines, and
others. The possibility of adaptation of animals to some substances that
cause pathological changes in offspring was demonstrated.

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1/2 019 UNCLASSIFIED PROCESSING DATE--23OCT70
TITLE--DEPENDENCE OF THE COOLING EFFECT ON THE MOISTURE CAPACITY AND
CONSTRUCTION OF THE SCREEN -U-
AUTHOR--SALIVON, S.G.
COUNTRY OF INFO--USSR
SOURCE--GIGIYENA I SANITARIYA, 1970, NR 6, PP 22-26
DATE PUBLISHED-----70
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--SPECIAL PURPOSE CLOTHING, EVAPORATIVE COOLING
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--3001/0830 STEP NO--UR/0240/70/000/006/0022/0026
CIRC ACCESSION NO--AP0126507
UNCLASSIFIED

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UNCLASSIFIED

PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0126507

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE WORK WAS AIMED AT STUDYING THE DEPENDENCE OF THE COOLING EFFECT OF THE SCREEN ON AS MOISTURE CAPACITY AND CONSTRUCTION DESIGN IN THE COURSE OF WORK IN AN INSULATING COSTUME AT AN AIR TEMPERATURE OF 35DEGREES. THE AUTHOR RECOMMENDS THE USE OF A COOLING SCREEN IN THE FORM OF A VEST MADE OF A NONWOVEN SEWN MATERIAL, THAT PROVIDES A BETTER COOLING EFFECT, IS MUCH LIGHTER AND COMFORTABLE FOR USE. THE DECREASE OF THE COOLING EFFECT WAS DUE TO THE DIMINISHING OF THE SIZE OF THE SCREEN CAN BE COMPENSATED BY AUGMENTING ITS MOISTURE CAPACITY. FACILTIY: INSTITUT BIOFIZIKI MINISTERSTVA ZDRAVOOKHRANENIYA SSSR, MOSKVA.

UNCLASSIFIED

USSR

UDC: 621.01.001

SALIYEV, A., Graduate Student

"Coefficient of Efficiency of a Closed Differential Mechanism With Noncircular Gear Wheels"

Moscow, Izvestiya Vysshikh Uchebnykh Zavedeniy, Mashinostroyeniye, No 5, 1973, pp 51-54

Abstract: The author studies problems associated with determining the coefficient of efficiency of a closed differential mechanism with noncircular gear wheels as a function of variation in the transmission ratio function of noncircular gear wheels. The obtained data is used to construct graphs of the variation of the coefficient of efficiency as a function of the turning angle of a noncircular gear wheel. This article was presented for publication by Professor I.I. Artobolevskiy of the Moscow Aviation Institute.

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- 6 -

1/2 030 UNCLASSIFIED PROCESSING DATE--11SEP70
TITLE--REDISTRIBUTION OF SULFUR IN TRANSFORMER STEEL -U-
AUTHOR--GRUZIN, P.L., ZEMSKIY, S.V., GRIGORKIN, V.I., MOSKALEVA, L.N.,
SALKOVA, V.K.
COUNTRY OF INFO--USSR
SOURCE--METALLOVED. TERM. OBRAB. METAL. 1970, (2) 16-19
DATE PUBLISHED-----70
SUBJECT AREAS--MATERIALS
TOPIC TAGS--TRANSFORMER STEEL, SULFUR, COLD ROLLING, THERMAL DIFFUSION,
RADIOGRAPHY
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1988/1310 STEP NO--UR/0129/70/000/002/0016/0019
CIRC ACCESSION NO--AP0106087
UNCLASSIFIED

2/2 030

UNCLASSIFIED

PROCESSING DATE--11SEP70

CIR2 ACCESSION NO--AP0106087

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE MICRODISTRIBUTION OF S IN TRANSFORMER STEEL WAS STUDIED BY AUTORADIOGRAPHY. TWO CONDITIONS WERE STUDIED, (1) COLD ROLLED FOLLOWED BY DECARBURIZATION HEATING, (2) COLD ROLLED FOLLOWED BY HIGH TEMP. ANNEALING IN H OR VACUUM THEN GIVEN A 2ND COLD ROLL. S IS DISTRIBUTED UNEVENLY, SULFIDES WERE OBSO. EVEN FOLLOWING HIGH TEMP. HEATING. RATIO-METRIC ANAL. OF THE LAYERS SHOWED THAT FOLLOWING HIGH TEMP. ANNEALING, THE CONC. OF S INSIDE THE SHEET WAS LOWERED TO ONE THIRTIETH-ONE TWENTIETH AS COMPARED WITH THE INITIAL WHILE THE SURFACE OF THESE SAME LAYERS (UP TO 5 MU) INCREASED CONC. 5-10 TIMES. THE ENRICHED S LAYER MUST BE REMOVED. THE STUDY OF C AND S DIFFUSION IN TRANSFORMED STEEL SHOWED THAT AT 900DEGREES, THE DIFFUSION OF S PROCEEDS AT ONE TENTH PRIME⁴, AND AT 1200DEGREES, AT ONE TENTH THE TIME OF C DIFFUSION.

UNCLASSIFIED

1/2 034 UNCLASSIFIED PROCESSING DATE--13NOV70
TITLE--SPACE ANGULAR CHARACTERISTICS OF LIQUID LASER OF THE POCL SUB3:ND
PRIME3POSITIVE BASE -U-
AUTHOR-(03)-SALKOVA, YE.N., SOSKIN, M.S., PDGORETSKIY, P.P.
COUNTRY OF INFO--USSR
SOURCE--UKRAYIN. FIZ. ZH. (USSR), VOL. 15, NO. 5, P. 824-6 (MAY 1970)
DATE PUBLISHED----MAR 70
SUBJECT AREAS--PHYSICS
TOPIC TAGS--LIQUID STATE LASER, RESONATOR, METAL ION, NEODYMIUM,
PHOSPHOROUS COMPOUND, OXYGEN COMPOUND, CHLORIDE
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3005/1802 STEP NO--UR/0185/70/015/005/0824/0826
CIRC ACCESSION NO--AP0133707
UNCLASSIFIED

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UNCLASSIFIED

PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AP0133707

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. SPACE ANGULAR CHARACTERISTICS OF A LIQUID LASER ON THE POCL SUB3:ND PRIME3POSITIVE BASE WERE INVESTIGATED EXPERIMENTALLY. THE DATA OBTAINED ARE EXPLAINED WELL ON THE BASIS OF THREE MODELS OF THE LIQUID LASER EQUIVALENT RESONATOR.

UNCLASSIFIED

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SALL, A.O.

UR 0482

Soviet Inventions Illustrated, Section II Electrical, Derwent,

2/70

243951 SELECTIVE THERMAL RECEIVER OF RADIATION for
absorption analytical instruments of the
type comprising a selective radiation absorber in
form of a gas mixture and a sensing element in form
of a diaphragm. The proposed receiver comprises a
solid radiation absorber, and the sensitive element
is in form of a series of metal wires with a high
TC of electric resistance.

The absorbers can be made of a material
whose dimensions vary in time owing to ageing etc.,
such as PTFE or similar plastic. It is proposed for
use for carbon dioxide gas analysers. The absorber
and the sensing element do not constitute a single
unit, but are in form of separate components close
to or in contact with each other.

Other organic plastics (celluloid, polyethy-
lene etc) can be used as absorbers for determination

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of other organic compounds (methane, ethane etc.).
Such receivers are highly selective, the
absorber material is easily removable and selected,
and the receiver components can be easily standard-
ised.

18.1.68 as 1210964/26-25. PAVLENKO.V.A. et al.
ANALYTICAL INSTRUMENTS MANUFACTURE DES.OFFICE ACAD.
SCIENCES USSR. (1.10.69) Bul 17/14.5.69. Class 421.
Int.Cl.G 01n.

AUTHORS: Pavlenko, V. A., Shutov, M. D., Budylin, Yu. L., Sall', A. O.,
Yuzupov, G. G., Sankin, V. A.

Spetsial'noye Konstruktorskoye Byuro Analiticheskogo Priborostroyeniya
AN SSSR

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19771628

USSR

UDC: 537.312.62

SALLI, I. V., SHVETS, V. S., DZENZERSKIY, V. A.

"Influence of Superfast Cooling on the Superconductivity of Lead-Bismuth Alloy"

Moscow, Sverkhprovodyashchiye splavy i soyedin.--sbornik (Superconductive Alloys and Compounds--collection of works), "Nauka", 1972, pp 147-150 (from RZh-Radiotekhnika, No 12, Dec 72, abstract No 12D567 [résumé])

Translation: The paper presents experimental data found in studying [the effect of] superfast cooling (10^5 - 10^6 °C/s) on the conductivity of an alloy of lead with additions of bismuth -- 15, 20, 25, 30, 35, 40 and 56.5 at.%. Normally cooled specimens (cooled in air) confirm the data known from the literature on the superconductive critical transition temperature as a function of the bismuth concentration in the alloy. In rapidly cooled alloys, T_c depends on the time of holding the specimens at room temperature between the processes of manufacture and measurement. Two illustrations, bibliography of ten titles.

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USSR

UDC 539.292

SALLI, I. V., DOLINSKAYA, V. Z., BORSHCHEVSKAYA, D. G., and SAVICH, A. I.,
Dnepropetrovsk Division of the Institute of Mechanics, Academy of Sciences
Ukr SSR

"Disturbances of Regular Growth in Lamellar Eutectics"

Kiev, Metallofizika, No 39, 1972, pp 106-111

Abstract: The directed crystallization of Pb-Sn, Cd-Pb, Cd-Zn, Zn-Sn, and Cd-Sn alloys of eutectic composition was investigated with the crystallization accomplished by the method of zone melting using a unit with a moving annular crucible. Directed crystallization of the investigated alloys leads to the formation of lamellar colonies oriented in the direction of heat escape. Disturbances were observed in the regular lamellar growth of eutectic phases in the form of repeated transverse bands. 5 figures, 1 table, 13 bibliographic references.

1/1

USSR

UDC 669.01:63

OVROUTSKIY, A. M., and SALLI, I. V.

"Investigation of the Mechanism of Growth of Primary Bismuth Crystals in Bi-Sn Alloys"

Kiev, Metallofizika, No 32, 1970, pp 118-123

Translation: The kinetics of growth and the formation of various forms of growth of primary bismuth crystals in alloys containing 0, 2, 5, 10, 20 and 30 wt.% tin were studied. The supercooling range over which the plane-face form of growth remains stable was established (crystals with a square and triangular cross section were observed). For crystallites with an edge of 0.16 mm this supercooling is 1, 3, 7, 16, 16, and 16°C, respectively, for alloys of the concentrations specified. As the supercooling increases, the form of growth changes. The crystal angles begin to extend and become the preferential direction of growth, subsequently forming dendrites, whose thickness is reduced as supercooling is increased.

The linear rates of growth and dissolution of primary bismuth crystals depending on the supercooling or superheating in alloys containing 10,
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USSR

OVRUTSKIY, A. M., and SALLI, I. V., Metallofizika, No 32, 1970, pp 118-123
20, and 30 wt.% tin were determined. A comparison of the rates of growth
and dissolution makes it possible to conclude that transfer processes have
a marked effect on the rate of growth of plane-face crystals.

Bibliography: 8 entries. Illustrations: 5.

2/2

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1/2 017 UNCLASSIFIED PROCESSING DATE--04DEC70
TITLE--SURFACE GRAPHITIZATION OF CEMENTITE -U-
AUTHOR--(03)-SALLI, I.V., FOMICHEV, O.I., POLYUSHKIN, N.I.
COUNTRY OF INFO--USSR
SOURCE--IZV. VYSSH. UCHED. ZAVED., CHERN. MET. 1970, 13(4), 155-7
DATE PUBLISHED-----70
SUBJECT AREAS--MATERIALS
TOPIC TAGS--GRAPHITIZATION, CAST IRON, X RAY DIFFRACTION
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3005/1220 STEP NO--UR/0148/70/013/004/0155/0157
CIRC ACCESSION NO--AT0133217
UNCLASSIFIED

UNCLASSIFIED

PROCESSING DATE--04DEC70

2/2 017

CIRC ACCESSION NO--AT0133217

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. STABILITY OF CEMENTITE WAS STUDIED. SAMPLES OF HYPEREUTECTIC CAST IRON WERE SUBJECTED TO QUENCHING FROM HIGH TEMPS., WHEREUPON THEY WERE ISOTHERMALLY ANNEALED IN VACUUM AT TEMPS. BELOW THE QUENCHING TEMP. AFTER ISOTHERMAL HOLDING, PPTS. OF THE FE SOLID SOLN. APPEARED ON THE POLISHED SURFACE OF THE CEMENTITE CRYSTALS, THE AMT. OF WHICH DEPENDED ON THE PRIOR QUENCHING TEMP. WITH DECREASING DIFFERENCE BETWEEN THE QUENCHING TEMP. AND THE ISOTHERMAL HOLDING TEMP. THE AMT. OF THE PPTS. ON THE SURFACE OF THE CEMENTITE CRYSTALS DECREASED. X RAY DIFFRACTION INVESTIGATION OF SAMPLES OF HYPEREUTECTIC CAST IRON CONTG. C 5, MN 3.5, AND CR 0.5PERCENT WAS ALSO PERFORMED. THE CAST IRON SAMPLES WERE HELD AT 873-1273DEGREESK, WHEREUPON THEY WERE QUENCHED IN WATER. THE POLISHED QUENCHED SAMPLES WERE INVESTIGATED BY THE RECIPROCAL LATTICE TECHNIQUE. ON THE BASIS OF THE INVESTIGATIONS PERFORMED, DIRECT GRAPHITIZATION OF CEMENTITE IS POSSIBLE. FACILITY: DNEPROPETROVSK. GOS. UNIV., DNEPROPETROVSK. USSR.

UNCLASSIFIED

1/2 021 UNCLASSIFIED PROCESSING DATE--04DEC70
TITLE--CHARACTERISTICS OF THE CRYSTALLIZATION OF EUTECTICS FOR SLIGHT
SUPERCOOLINGS -U-
AUTHOR--(04)-SALLI, I.V., FOMICHEV, O.I., SAKHNO, G.A., Khablo, T.V.
COUNTRY OF INFO--USSR
SOURCE--IZVEST. V.U.Z. TSVETNAYA MET., 1970, (2), 126-130.
DATE PUBLISHED-----70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--LEAD ALLOY, TIN ALLOY, CRYSTALLIZATION, EUTECTIC MIXTURE,
SUPERCOOLING

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--3003/1502 STEP NO--UR70149/70/000/002/0126/0130
CIRC ACCESSION NO--AT0130431
UNCLASSIFIED

2/2 021
CIRC ACCESSION NO--AT0130431

UNCLASSIFIED

PROCESSING DATE--04DEC70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE PHYSICAL NATURE OF THE PROCESSES UNDERLYING THE FORMATION AND SOLIDIFICATION OF EUTECTICS IN VARIOUS ALLOYS (E.G. PB, SN) IS DISCUSSED IN THE LIGHT OF THE LATEST THEORETICAL AND EXPERIMENTAL DATA, WITH SPECIAL REF. TO THE PART PLAYED BY THE DEGREE OF SUPERCOOLING INVOLVED. THUS, FOR EXAMPLE, THE FORMATION OF AN ESSENTIAL EUTECTIC COLUMN ONLY BECOMES POSSIBLE FOR FAIRLY SUBSTANTIAL SUPERCOOLINGS AND SUPERSATURATIONS. BEFORE THESE CONDITIONS ARE ACHIEVED THERE IS A TENDENCY FOR TWO 'PSEUDO PRIMARY' PHASES TO SEPARATE, AND ONLY LATER DOES TRUE EUTECTIC SOLIDIFICATION SET IN.

UNCLASSIFIED

1/2 019 UNCLASSIFIED
TITLE--PRODUCTION OF SEMICONDUCTOR SILICON -U- PROCESSING DATE--16OCT70
AUTHOR--(02)-SALLI, I.V., FALKEVICH, E.S.
COUNTRY OF INFO--USSR
SOURCE--MOSCOW, METALLURGIYA, 1970, 149 PP
DATE PUBLISHED-----70
SUBJECT AREAS--PHYSICS
TOPIC TAGS--SILICON SEMICONDUCTOR, CRYSTAL GROWING, MONOGRAPH
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1987/0486 STEP NO--UR/0000/70/000/000/0001/0149
CIRC ACCESSION NO--AM0104093
UNCLASSIFIED

2/2 019

UNCLASSIFIED

PROCESSING DATE--16OCT70

CIRC ACCESSION NO--AM0104093

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. TABLE OF CONTENTS: PREFACE 4.
CHAPTER I PROPERTIES AND PRODUCTION METHODS OF SEMICONDUCTOR SILICON
7. CHAPTER II THEORY OF NUCLEATION AND GROWTH OF CRYSTALS 34.
CHAPTER III INVESTIGATION OF GROWTH OF CRYSTALS FROM A GASEOUS PHASE
78. CHAPTER IV INVESTIGATION OF GROWTH OF SINGLE SILICON CRYSTALS
FROM A MELT 106. CHAPTER V PROBLEMS CONNECTED WITH PRODUCTION OF
SINGLE SILICON CRYSTALS WITH AN ASSIGNED STRUCTURE 141. BIBLIOGRAPHY
147. THE BOOK BASED ON EXPERIMENTAL DATA AND THEORETICAL PRINCIPLES
DEVELOPED BY THE AUTHORS DEALS WITH THE GROWTH OF CRYSTALS OF
SEMICONDUCTOR SILICON. THE BOOK WAS WRITTEN FOR SPECIALISTS WORKING ON
PROBLEMS OF CRYSTAL GROWTH AND THOSE CONNECTED WITH PRODUCTION OF
SILICON CRYSTALS.

UNCLASSIFIED

USSR

UDC 621.315.592

S
SALLI, I. V., and FAL'KEVICH, E. S.

"Production of Semiconducting Silicon"

Proizvodstvo poluprovodnikovogo kremniya (cf. English above), Moscow, "Metallurgiya", 1970, 150 pp, ill., 40 k. (from RZh-Metallurgiya, No 6, Jun 70, Abstract No 6 G419 K)

Translation: On the basis of extensive experimental material and theoretical propositions worked out by the authors, a description is given of the growth processes of crystals of semiconducting Si. The mechanism of crystal growing from the gaseous and liquid phases is considered in detail. The relationship between the conditions of crystallization, origination, and distribution of structural defects is shown. Consideration is also given to problems related to the development of methods of Si production with a previously specified structure. The monograph is intended for a broad group of specialists dealing with problems of crystal growing, and for those working directly in the production of Si crystals.

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USSR

UDC 539.1.073.7:77.023:534.29

AKOPOVA, A. B., MAGRADZE, N. V., MELKUMYAN, L. V., SAL'MAN, A. G., Yerevan
Physics Institute

"Acoustical Method for Processing of Glued Nuclear Emulsion Layers"

Moscow, Zhurnal nauchnoy i prikladnoy fotografii i kinematografii, No. 6,
Nov/Dec 71, pp 441-443

Abstract: Experiments were conducted on emulsion layers of the BR type of thickness 400 and 500 μ irradiated on the Yerevan accelerator by a 3.8 Gev electron beam with an intensity of 10^4 particles/cm². The purpose of the study was to intensify the complete cycle of processing nuclear layers with an increase in the quality of the developed image. It was shown in developing the accelerated method for emulsion layer development in the free state by means of high-frequency ultrasonic oscillations that the method is inapplicable for glued layers due to the formation of a set of bubbles caused by certain features of the ultrasound. Upon going to the region of low sound frequencies free from such undesirable effects, it was possible to completely

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AKOPOVA, A. B., et al, Zhurnal nauchnoy i prikladnoy fotografii i kinematografii, No. 6, Nov/Dec 71, pp 441-443

avoid bubbling of the layer and to develop an optimal regime for the photographic processing of glued layers in the sonic field at a frequency of 50 Hz and an amplitude of 1.5 mm. In developing the glued layers diffusion of the components of the solutions was obtained only from one surface of the emulsion layer. As distinct from sonic processing of glued layers which leads to a 4-fold acceleration of the development process, the duration of the working in this case was shortened on the average by only a factor of 2 as compared with the ordinary process. As expected the doubling of the acceleration of diffusion of the developing material in the layer and the reaction product from the layer into the solution contribute to the decrease in the grain background of fog and to a drop in the inhomogeneity of the development over the depth of the layer (10-15%), thus increasing the reliability of the identification of the events recorded. A table is given showing the photographic parameters over the depth of emulsion layers processed by the ordinary method and under acoustical oscillations. It shows that acoustical oscillations raise the sensitivity-fog ratio by 15% on the average. The greatest intensification of all stages of the photographic development was noted in stages

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AKOPOVA, A. B., et al, Zhurnal nauchnoy i prikladnoy fotografii i kinematografii, No 6, Nov/Dec 71, pp 441-443

for which the role of diffusion exchange played an especially great role. A rise in the rate of swelling of the emulsion layer in a sonic field, aiding the expansion of intermicellar channels and contributing to the acceleration of diffusion of thiosulphate in the gelatin to the silver halogenide crystals was established experimentally. Acoustical oscillations applied to the emulsion-solution system with a frequency of 50 Hz thus considerably reduce the activation energy for diffusion of the reacting molecules, which is verified by the growth of the relative sonic effect with an increase in the magnitude of the oscillations from 0.4 to 1.5 mm. A device for such processing is pictured.

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1/2 017
TITLE--ENERGY DISTRIBUTION OF ALPHA PARTICLES FROM THE P PLUS PRIME11 B
YIELDS 3 ALPHA REACTION -U-
AUTHOR--(05)--KOMAROV, V.V., POPOVA, A.M., ROMANOVSKIY, YE.A., KALACHEVA,
Z.F., SALMAN, KH.
COUNTRY OF INFO--USSR
SOURCE--IZV. AKAD. NAUK SSSR, SER. FIZ. 1970, 34(11), 84-8
DATE PUBLISHED-----70

SUBJECT AREAS--PHYSICS, NUCLEAR SCIENCE AND TECHNOLOGY
TOPIC TAGS--ENERGY SPECTRUM, ALPHA SPECTRUM, PROTON BOMBARDMENT, BORON
ISOTOPE, CARBON ISOTOPE, EXCITED NUCLEUS, CALCULATION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1988/0207

CIRC ACCESSION NO--AP0105283

UNCLASSIFIED

STEP NO--UR/0048/70/034/001/0084/0088

2/2 017

UNCLASSIFIED

PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0105283

ABSTRACT/EXTRACT--(U) GP-G- ABSTRACT. THE CALCN. IS DEMONSTRATED OF THE WIDTH OF A 2 PARTICLE ALPHA ALPHA RESONANCE (L PRIMEPI EQUALS 2 POSITIVE), APPEARING IN THE ENERGY DISTRIBUTIONS OF THE ALPHA PARTICLES IN THE REACTION P PLUS PRIME11 B YIELDS 3 ALPHA WHICH OCCURS THROUGH THE STATES 1 MINUS AND 0 POSITIVE OF THE PRIME12 C NUCLEUS (E EQUALS 17.23 AND 17.77 MEV). THE CALCD. VALUES AGREE VERY WELL WITH THE EXPTL. DATA OBTAINED FROM THE EXPTS. WITH THE ENERGY OF THE INCIDENT P 1.7 AND 2.0 MEV, RESP.

UNCLASSIFIED

1/2 007 UNCLASSIFIED PROCESSING DATE--20NOV70
TITLE--POSSIBLE VOLUME CONDENSATION OF MERCURY IN IONIZED MERCURY VAPOR
~~U~~
AUTHOR--SALMAN, M.A. S
CCUNTRY OF INFO--USSR
SOURCE--Zh. TEKH. FIZ. 1970, 40(4), 875-82
DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--MERCURY, METAL VAPOR, CONDENSATION, ANGULAR DISTRIBUTION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--2000/0283 STEP NO--UR/0057/70/040/004/0875/0882
CIRC ACCESSION NO--AP0124042
UNCLASSIFIED

2/2 007

UNCLASSIFIED

PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AP0124042

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE PROBLEM OF POSSIBLE VOL. CONDENSATION OF HG DROPS IN THE GRID ANODE SPACE DURING THE MAIN ARC IGNITION OF GAS DISCHARGE DEVICES WAS STUDIED. THE ANGULAR DISTRIBUTION OF SCATTERED (MODULATED) MONOCHROMATIC LIGHT (λ EQUALS 4610 PLUS OR MINUS 100 ANGSTROM, WHICH LIES WITHIN THE REGION FREE FROM HG EMISSION LINES) WAS USED TO DETECT THE LIQ. HG DROPS. THE SENSITIVITY OF THE METHOD ENABLED ONE TO FIND DROPS WITH DIAMS. GREATER THAN 10 PRIME NEGATIVE 4 CM AT CONCNS. OF 50-100-CM PRIME 3. THE EXPTS. WERE CARRIED OUT IN A SPECIAL DEVICE WITH DISCHARGE CURRENTS LESS THAN 20 A. NO DROPS WERE FOUND UNDER CONDITIONS OF BOTH STEADY STATE AND ARTIFICIAL VAPOR SUPERSATN.

UNCLASSIFIED

1/2 018 UNCLASSIFIED PROCESSING DATE--23OCT70
TITLE--TWO PARTICLE RESONANCE NARROWING IN THREE PARTICLE NUCLEAR
REACTIONS -U-
AUTHOR-(02)-KOMAROV, V.V., SALMAN, H.A. S
COUNTRY OF INFO--USSR
SOURCE--PHYS. LETT: 318: 52-5, 19 JAN 70
DATE PUBLISHED--19JAN70
SUBJECT AREAS--PHYSICS, NUCLEAR SCIENCE AND TECHNOLOGY
TOPIC TAGS--RESONANCE SCATTERING, MULTIPLE SCATTERING, ALPHA PARTICLE,
NUCLEAR REACTION, EXCITED NUCLEUS, PROTON BOMBARDMENT, BORON ISOTOPE
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY KEEL/FRAME--2000/0985 STEP NO--NE/0000/70/031/000/0052/0055
CIRC ACCESSION NO--AP0124644
UNCLASSIFIED

2/2 018

UNCLASSIFIED

PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0124644

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. NARROWING OF THE TWO ALPHA PARTICLE RESONANCE WIDTH IN THE FINAL STATE OF THE REACTION LEADING TO THREE ALPHA PARTICLES IN THE EIXT CHANNEL IS CONSIDERED ON THE BASE OF GENERAL MULTIPARTICLE SCATTERING THEORY. CALCULATIONS WERE MADE FOR INTERPRETATION OF THE NARROWING EFFECT IN THE REACTION PRIME11 B(P, 3 ALPHA) AND PRIME10 B(D, 3 ALPHA). SOME RULES ARE PRESENTED FOR IDENTIFICATION OF THE MANY PARTICLE REACTION MECHANISM BY THE FINAL STATE INTERACTION RESONANCE WIDTH. USE OF SUCH REACTIONS TO DEDUCE THE SPECTROSCOPIC PROPERTIES OF HIGHLY EXCITED INTERMEDIATE STATES IS DISCUSSED. FACILITY: MOSCOW STATE UNIV.

UNCLASSIFIED

1/2 017
UNCLASSIFIED
TITLE--TWO PARTICLE RESONANCE NARROWING IN THREE PARTICLE NUCLEAR
REACTIONS -U-
AUTHOR--(02)-KOMAROV, V.V., SALMAN, M.A. - possibly
COUNTRY OF INFO--USSR
SOURCE--PHYS. LETT. B 1970, 31(2), 52-5
DATE PUBLISHED-----70
SUBJECT AREAS--PHYSICS, NUCLEAR SCIENCE AND TECHNOLOGY
TOPIC TAGS--RESONANCE SCATTERING, ALPHA PARTICLE, BORON ISOTOPE, PROTON
BOMBARDMENT, DEUTERON BOMBARDMENT, BERYLLIUM ISOTOPE, CARBON ISOTOPE
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1982/0680
CIRC ACCESSION NO--AP0052139
STEP NO--NE/0000/70/031/002/0052/0055
UNCLASSIFIED

2/2 017

UNCLASSIFIED

PROCESSING DATE--16OCT70

CIRC ACCESSION NO--AP0052139

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE 2 ALPHA PARTICLE RESONANCE WIDTH NARROWING IN THE FINAL STATE OF THE REACTION LEADING TO 3 ALPHA PARTICLES IN THE EXIT CHANNEL IS STUDIED BY GENERAL MULTIPARTICLE SCATTERING THEORY (K., ET AL., 1967). CALCNS. WERE MADE OF THE NARROWING EFFECT IN PRIME11 B(P,3ALPHA) AND PRIME10 B(D,3ALPHA) WHICH GO THROUGH THE PRIME12 C INTERMEDIATE STATES FOR P AND D ENERGIES OF 163-3000 KEV. THE REACTIONS ARE ASSUMED TO PRODUCE SIMULTANEOUSLY 3 ALPHA PARTICLES, WHICH INTERACTED BY PAIRS WHILE IN THE INTERACTION VOL. THE CALCD. AND EXPTL. PRIME8 BE(2 PLUS) RESONANCES IN PRIME11 B(P,3ALPHA) AGREE AT E SUBP EQUALS 1.4 MEV, PRIME12 C(1 MINUS, 17, 23 MEV) THETA SUBALPHA1 EQUALS 95DEGREES LAB.; AND E SUBP EQUALS 2.0 MEV, PRIME12 C(0 PLUS, 17, 77 MEV), THETA SUBALPHA1 EQUALS 84DEGREES LAB. THE CALCD. AND EXPTL. PRIME8 BE(4 PLUS) RESONANCE IN PRIME10 B(D,3ALPHA) AGREE AT E SUBD EQUALS 1.9 MEV, PRIME12 C(1 MINUS, 26.9 MEV), THETA SUBALPHA1 EQUALS MINUS THETA SUBALPHA2 EQUALS 124DEGREES LAB. SOME RULES ARE PRESENTED FOR IDENTIFICATION OF THE MANY PARTICLE REACTION MECHANISM BY THE FINAL STATE INTERACTION RESONANCE WIDTH. USE OF SUCH REACTIONS TO DEDUCE THE SPECTROSCOPIC PROPERTIES OF HIGHLY EXCITED INTERMEDIATE STATES IS DISCUSSED. FACILITY: INST. NUCL. PHYS., MOSCOW STATE UNIV., MOSCOW, USSR.

UNCLASSIFIED

1/2 048
TITLE--MERCURY DROP SIZE DISTRIBUTION FOR DROPS SPRAYED BY A FIXED CATHODE
SPOT -U-
AUTHOR--SALMAN, M.A.
COUNTRY OF INFO--USSR
SOURCE--ZH. TEKH. FIZ. 1970, 40(4), 872-4
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY, MATERIALS
TOPIC TAGS--LIQUID METAL, MERCURY, RADIATION EFFECT, DROPPING MERCURY
ELECTRODE, LIQUID DROP MODEL, GAS DISCHARGE
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3004/0910
CIRC ACCESSION NO--AP0131496
STEP NO--UR/0057/70/040/004/0872/0874
UNCLASSIFIED

2/2 048

UNCLASSIFIED

PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AP0131496

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE POSSIBILITY OF FORMING A LIQ. HG PHASE IN THE VOL. OF A GAS DISCHARGE APP. DURING THE BURNING OF THE ARC WAS STUDIED BY MEASURING THE ANGULAR DISTRIBUTION OF SCATTERED, MONOCHROMATIC RADIATION. THE SENSITIVITY OF THE METHOD ALLOWED DROPS HAVING DIAMS., D EQUALS $1-(10-15)$ MU TO BE OBSD. FOR CONCNS. OF 50-100-CM PRIME³. THE EXPTS. WERE CARRIED OUT FOR CURRENTS SMALLER THAN OR EQUAL TO 20 A UNDER STEADY STATE VAPOR CONDITIONS AND UNDER UNSTEADY STATE CONDITIONS FOR ARTIFICIAL DEGREES OF SUPER SATN. OF SMALLER THAN OR EQUAL TO 100-FOLD IN THE APP. VOL. THE FORM OF THE DROP DISTRIBUTION FUNCTION WAS GIVEN AS A EQUALS $1.7 \text{ TIMES } 10 \text{ PRIME NEGATIVE } 3 \text{ E PRIME } 0.2 \text{ I SUBP .R PRIME NEGATIVE } 2$, WHERE I SUBP IS THE DISCHARGE CURRENT AND R IS THE SIZE OF THE DROPS.

UNCLASSIFIED

Acc. Nr: **AP0044609**

Ref. Code: **UR0497**

PRIMARY SOURCE: **Klinicheskaya Meditsina, 1970, Vol 48,**
Nr 1, pp 102-105

**CHOLEGRAPHY IN COMBINATION WITH RELAXATION
DUODENOGRAPHY IN THE DIAGNOSIS OF DISEASES
OF THE HEPATOPANCREATODUODENAL ZONE**

R. N. Gurevich, M. M. Salman

Summary

In order to improve the recognition of changes in the hepatopancreatoduodenal zone the authors recommend a combined technique (choleduodenography) of roentgenological investigation of the bile-excretory system and duodenum. The advantages of combined choleduodenography are — obtaining of more complete information of the state of the entire hepatopancreatoduodenal zone, shortening of the period of the patient's examination and reduction of the radiation exposure.

REEL/FRA
19771286

4402

Acc. Nr: 170044519

Ref. Code: DR 0497

PRIMARY SOURCE: Klinicheskaya Meditsina, 1970, Vol 48,
Nr 1, pp 61-66


HIATUS HERNIA AND PEPTIC ULCER

A. S. Stepenko, A. L. Grebenev, M. M. Salimov, A. A. Brodskaya
Summary

The results of studies of 50 patients suffering from gastroduodenal peptic ulcer are presented. For the detection of hiatus hernia the authors conducted complex studies including roentgenological investigation and esophagotonokymography. Hiatal hernia was revealed in 20 per cent of patients, this giving grounds to consider it as one of the complications of ulcer. The concomitance of hiatus hernia changes somewhat the clinical picture and requires certain corrections in the treatment of patients with peptic ulcer.

REEL/FRAME
19771296

USSR

UDC: 621.315.592 

VUL, B. M., IVANOV, V. S., RUKAVISHNIKOV, V. A., SALIMAN, V. M.,
and CHAPNIN, V. A., P. N. Lebedev Physics Institute, Moscow

"Characteristics of Cadmium Telluride Doped With Iron"

Leningrad, Fizika i tekhnika poluprovodnikov, No 7, 1972, pp
1264-1267

Abstract: The electrical characteristics, photoconductivity, absorption, and electrical absorption in CdTe doped with Fe are considered. The iron impurity was introduced, in the experiments described, into the CdTe by diffusion annealing at 950° C for 50-100 hours in quartz ampoules exhausted to a pressure of 10⁻⁴ mm Hg or under the pressure of saturated Cd vapors. To investigate the effect of the iron impurity, measurement of the Hall constant and electrical conductivity was made in the 80-400° K temperature range, and the photoconductivity and absorption as well as the electrical absorption as functions of the photon energy were studied. Curves are plotted for the absorption coefficient as a function of photon energy at temperatures of 300, 90, and 20° K, and for electron concentration and mobility as functions of the

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USSR

VUL, B. M., et al, Fizika i tekhnika poluprovodnikov, No 7, 1972,
pp 1264-1267

temperature. The electron mobility curve shows an anomalous characteristic in the 150-250° K range, where the mobility takes a sharp jump. The authors note that this peculiarity cannot be explained by traditional mechanisms and should be further explored.

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SALIMANOV, L. P.

PSYCHOPHYSIOLOGICAL ASPECTS OF LAYOUT OF MAN-OCCUPIED COMPARTMENTS
[Article by V. V. Zefel'd and L. P. Salimov, Moscow, *Kosmicheskaya Biologiya i Meditsina*, Russian, Vol 6, No 1, pp 67-73, 1972, submitted for publication 28 July 1971]

SPRS 55487
121 6/26/1972
IDC 62978.042

Abstract: This paper described approaches to the layout of manned compartments in future spacecraft on the basis of the spatial parameters of the human visual and motor fields. It discusses the effectiveness of different layouts as illustrated by various United States space vehicles.

In both the Soviet and foreign literature the problems related to the layout of the man-occupied part of future interplanetary spacecraft are discussed for the most part from the engineering and design point of view. This is not surprising, since it is precisely engineers and designers who design the vehicles which enable us to escape beyond the earth's limits and to perform flights to distant planets. However, in their recommendations pertaining to configuration and size, the total number and relative arrangement of compartments, man's psychophysiological peculiarities, especially the nature of his motor activity, are not always taken into account.

Accordingly, it is desirable to determine the spatial parameters of manned compartments of future interplanetary ships by first deciding on the layout of the rooms and their relative position. In order to create the necessary convenience and make rational use of working time the selected rooms must be broken down into different functional groups combined on the basis of the similarity of work performed (operations, housekeeping, etc.; Fig. 1); between the functional groups and the individual rooms within each group it is necessary to establish the lines for basic intercommunication: transport for man and objects, visual and direct verbal. The functional groups of rooms are arranged in four compartments (stories). Due to the great height of the hall for physical exercises it is arranged (vertically) in two compartments (stories) (Fig. 2,a). The remaining rooms of the functional groups (see Fig. 1) are arranged in the other two compartments (stories). The diagrams given here

PHYSICS
Crystals & Semiconductors

USSR

UDC 621.315.592

ABDULLAYEV, G. B., AKHUNDOV, G. A., AGAYEVA, A. A., SALMANOV, Y. M., and
YAROSHETSKIY, I. D. -- Azerbaydzhan State University imeni S. M. Kirov, Baku,
and Physical-Technical Institute imeni A. F. Ioffe, USSR Academy of Sciences,
Leningrad

"Recombination Radiation in Solid Solutions Under Neodymium Laser Excitation"

Leningrad, Fizika i Tekhnika Poluprovodnikov, Vol 7, No 6, Jun 73, pp 1103 - 1110

Abstract: The studies were made with $\text{GaS}_x\text{Se}_{1-x}$, where x was varied from 0.05 to 0.80. The crystals were grown by slow cooling with a constant temperature gradient; plane parallel sheets were then peeled off for testing at $T = 77^\circ\text{K}$. It was found that the two primary spectral bands, caused by the decay of free excitons with the release of 1 and 2 optical phonons respectively, were displaced smoothly with change in the crystal composition. Increasing the pumping power narrowed the bands and sharply increased intensity at the maxima (by a factor of W^n , where W is the pumping power and n varied from 4 to 7). The data indicates the availability of laser radiation from these crystals over a range from 4350 angstroms to 6000 angstroms.

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USSR

SALMIN, I. D., KANTSYREVA, T. A.

"Use of Method of Branches and Bounds for Solution of Problems in Linear Integer Programming with Boolean Variables"

Ekon.-mat. Metody i Programmir. Plan.-ekon. Zadach. [Mathematical Economic Methods and Programming of Planning and Economic Problems -- Collection of Works], Moscow, 1972, pp 224-227 (Translated from Referativnyy Zhurnal, Kibernetika, No 1, 1973, Abstract No 1 V713 by Yu. Finkel'shteyn).

Translation: The multivariate knapsack problem is studied:

$$F = \sum_{j=1}^n c_j x_j \rightarrow \max, \quad (1)$$

$$\sum_{j=1}^n a_{ij} x_j \leq b_i, \quad i=1, 2, \dots, m, \quad (2)$$

$$x_j = 0 \text{ or } 1, \quad j=1, 2, \dots, n. \quad (3)$$

Here all $a_{ij} \geq 0$. An algorithm of branches and bounds is suggested for its solution, distinguished by its simple (though not always effective) 1/2

USSR

SALMIN, I. D., KANTSYREVA, T. A., Ekon.-mat. Metody i Programmir. Plan.-
ekon. Zadach., Moscow, 1972, pp 224-227.

method of calculating the balance. The statement of the authors of the
possibility of reducing problems such as (1)-(3) without the condition
 $a_{ij} \geq 0$ to a problem of type (1)-(3) with the condition $a_{ij} \geq 0$ is erro-
neous (since it does not consider the appearance of conditions such as
 $x_j + x_j' = 1$).

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USSR

UDC 615.371:576.851.49).03:616.34-022-084).036.8

KHEYFETS, L. B., LEVINA, L. A., BENTSIANOVA, T. G., and SALMIN, L. V., Moscow
Institute of Vaccines and Sera imeni Mechnikov

"Protective Activity of Various Antigenic Complexes of Typhoid Vaccines and Prospects on Improving the Chemical Vaccines"

Moscow, Zhurnal Mikrobiologii, Epidemiologii i Immunobiologii, No 5, 1970, pp 89-98

Abstract: New possibilities for studying the role of individual antigens in the formation of postvaccinal immunity were discovered in connection with the existence of vaccine samples with a known efficacy for man. Experimental study of these vaccines failed to demonstrate any correlation between the quantitative content of Vi-antigen and the protective capacity for man. However, qualitative differences in O-antigen were revealed in vaccines with a different efficacy for man, which can be detected by immunoelectrophoresis and metachromatic staining. A direct correlation was found between the efficacy of the vaccine and the quantitative content of H-antigen. This is one of the indirect indications of the presence of typhoid protective labile antigen (LP-antigen). The content and activity of LP-antigen in the vaccine is determined by the capacity of the preparation to stimulate the formation of H-antibodies during immunization of human beings and experimental animals. In production and improvement of the chemical vaccines, sufficiently reliable methods should be employed to preserve all the components of O-, Vi-, H-

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KHEYFETS, L. B., et al., Zhurnal Mikrobiologii, Epidemiologii i Immunobiologii,
No 5, 1970, pp 89-93

and LP-antigens contained in the initial microbial suspensions in a natural condition (as far as possible).

1/2 024

UNCLASSIFIED

PROCESSING DATE--02OCT70

TITLE--COMPARATIVE ASSESSMENT OF IMMUNOLOGICAL EFFICACY OF AKDC VACCINES
WITH VARIOUS QUANTITATIVE CONTENT OF COMPONENTS IN PRIMARY IMMUNIZATION
AUTHOR--(65)-KHEYFETS, L.B., SALMIN, L.V., SEGAL, L.S., BRUSINA, L.I.,
GURDZIANTS, E.M.
COUNTRY OF INFO--USSR

SOURCE--ZHURNAL MIKROBIOLOGII, EPIDEMIOLOGII I IMMUNOBIOLOGII, 1970, NR
4, PP 134-140
DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--IMMUNIZATION, VACCINE, TETANUS TOXOID, DIPHTHERIA

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1990/1485

STEP NO--UR/0016/70/000/004/0134/0140

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2/2 024

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PROCESSING DATE--020CT70

CIRC ACCESSION NO--AP0109545

ABSTRACT/EXTRACT--(U) GP-0-

ABSTRACT. THE AUTHORS CARRIED OUT A STRICTLY CONTROLLED FIELD TRIAL ON COMPARISON OF THREE VARIETIES OF AKDC VACCINE, DIFFERING BY CONTENT OF THE VACCINAL DOSE OF DIPHTHERIA, TETANUS AND PERTUSSIS COMPONENTS. BLOOD SERA OBTAINED BEFORE THE IMMUNIZATION AND AFTER EACH OF THE THREE INJECTIONS OF THE PREPARATION WERE EXAMINED; THE LAST SAMPLE WAS TAKEN IN 1.5-2.5 MONTHS AFTER THE THIRD INJECTION. AS DEMONSTRATED, REDUCED DOSES OF TETANUS TOXOID (EITHER ITS DIMINISHED CONTENT IN THE VACCINE FROM 5 TO 2.5 BU, OR ITS INCLUSION INTO THE ASSOCIATED PREPARATION ONLY IN 2 INJECTIONS, FOR EXAMPLE IN THE 2ND AND 3RD, THE THIRD INJECTION CONTAINING NO TOXOID) WERE JUSTIFIED. ANALOGOUS CHANGES COULD ALSO BE MADE IN RESPECT TO DIPHTHERIA TOXOID, BUT IN THE LATTER CASE A STUDY OF THE TITRES AT THE MORE REMOTE PERIODS AFTER THE IMMUNIZATION ARE REQUIRED. IT IS OF EXPEDIENCE TO INCREASE THE CONTENT OF PERTUSSIS COMPONENT IN AKDC VACCINE FROM 10 TO 5 MILLIARD MICROBIAL CELLS PER DOSE.

UNCLASSIFIED

1/2 010 UNCLASSIFIED PROCESSING DATE--16OCT70
TITLE--PROTECTIVE ACTIVITY OF VARIOUS ANTIGENIC COMPLEXES OF TYPHOID
VACCINES AND PROSPECTS OF IMPROVEMENT OF CHEMICAL VACCINES -U-
AUTHOR-(04)-KHEYFETS, L.B., LEVINA, L.A., BENTSIAKOVA, T.G., SALMIN, L.V.

COUNTRY OF INFO--USSR

SOURCE--ZHURNAL MIKROBIOLOGII, EPIDEMIOLOGII I IMMUNOBIOLOGII, 1970, NR 5,

PP 89-96

DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--TYPHOID FEVER VACCINE, VI ANTIGEN, H ANTIGEN, O ANTIGEN

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

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CIRC ACCESSION NO--AP0114527

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PROCESSING DATE--16OCT70

CIRC ACCESSION NO--AP0114527

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. NEW POSSIBILITIES FOR STUDYING THE ROLE OF INDIVIDUAL ANTIGENS IN THE FORMATION OF POST VACCINAL IMMUNITY WERE OPENED IN ASSOCIATION WITH THE PRESENCE OF VACCINE SAMPLES WITH KNOWN EFFICACY FOR MAN. EXPERIMENTAL STUDY OF THESE VACCINES FAILED TO DEMONSTRATE ANY CORRELATION BETWEEN THE QUANTITATIVE CONTENT OF VI ANTIGEN AND THEIR PROTECTIVE CAPACITY FOR MAN. ALONG WITH THIS THERE WERE REVEALED QUALITATIVE DIFFERENCES OF THE O ANTIGEN (DETECTABLE WITH THE AID OF IMMUNOELECTROPHORESIS AND BY METACHROMATIC STAINING) IN THE VACCINES WITH DIFFERENT EFFICACY FOR MAN. THERE WAS FOUND A DIRECT CORRELATION BETWEEN THE EFFICACY OF THE VACCINES AND THE QUANTITATIVE CONTENT OF H ANTIGEN IN THEM; THIS IS ONE OF THE INDIRECT INDICATIONS OF THE EXISTENCE OF TYPHOID PROTECTIVE LABILE ANTIGEN (LP ANTIGEN). THE CONTENT AND THE ACTIVITY OF LP ANTIGEN IN THE VACCINE IS CONTROLLED BY THE CAPACITY OF THE PREPARATION TO STIMULATE FORMATION OF H ANTIBODIES IN IMMUNIZATION OF HUMAN BEINGS AND EXPERIMENTAL ANIMALS. IN ELABORATION AND IMPROVEMENT OF CHEMICAL VACCINES, SUFFICIENTLY DELICATE METHODS SHOULD BE EMPLOYED TO PRESERVE ALL THE COMPONENTS OF O, VI, H AND LP ANTIGENS, CONTAINED IN THE INITIAL MICROBIAL SUSPENSIONS, IN AS FAR AS POSSIBLE NATURAL CONDITION. FACILITY: MOSCOW INSTITUT VAKTSIN I SYVOROTOK IM. MECHNIKOVA.

UNCLASSIFIED

USSR

UDC 629.7.036.3

SALMIN, V. V.

"Optimal Control of a Combined Motor System"

Tr. Kuybyshev, Aviats. In-t. [Works of Kuybyshev Aviation Institute], No 35, 1971, pp 203-208, (Translated from Referativnyy Zhurnal, Aviatsiionnye i Raketnye Dvigateli, No 8, 1972, Abstract No 8.34.101, from the Resume).

Translation: The possibility is indicated of using a motor system consisting of a limited exhaust velocity motor and a limited power motor. The problem of optimization is studied for a system of this type including an ideally controllable limited power motor. The statement of the problem is justified by the fact that it is expedient to use a combination of motors to maximize payload and allow performance of a certain class of maneuvers in a fixed time. 5 Biblio. Refs.

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USSR

UDC 531.55:521.1

GURMAN, V. I., SALMIN, V. V., POPOV, YU. B., and NIKULIN, A. M.

"Control of Low-Thrust Space Vehicles With Account Taken of Their Motion About the Center of Mass"

Moscow, Tr. Pyatykh Chteniy, Posvyasch. Razrabotke Nauch. Naslediya i Razvitiyu Idey K. E. Tsiolkovskogo. Sekts. "Mekh. Kosmich. Poleta" (Works of the Fifth Lecture Series Devoted to Development of the Scientific Heritage and Development of the Ideas of K. E. Tsiolkovskiy. Series "Mechanics of Space Flight"), 1971, pp 59-67 (from Referativnyy Zhurnal, Mekhanika, No 2, Feb 72, Abstract No 2A73 by G. S. Suvorov)

Translation: An investigation is made of the possibility of realizing some programs of control for the problem of the departure of a space craft with low thrust from the gravitational field of the Earth. The vehicle is assumed to be a solid body of variable mass. Control of movement of the center of mass and of rotation around it is effected by means of two electric-rocket cruise propulsion units. The vehicle is acted upon by the gravitational moment M_{gr} and by the controlling moment M_{contr} of the engine thrust. The acceleration vector lies in the orbital plane, and the motion is regarded only with respect to the pitch theta. Two systems of a space craft with an electric-rocket

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1/2 010
TITLE--EFFECT OF NEW HERBICIDES ON VARIOUS TYPES OF WEEDS AND ON BARLEY
CROPS -U-
AUTHOR--SALNA, A. S
COUNTRY OF INFO--USSR
SOURCE--KHIM. SEL. KHOZ. 1970, 8(1), 43-4
DATE PUBLISHED-----70
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES, AGRICULTURE
TOPIC TAGS--HERBICIDE, CEREALCROP/(U)PESCO T HERBICIDE, (U)BANLEN
HERBICIDE, (U)COMBILIN HERBICIDE
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1990/1737
CIRC ACCESSION NO--AP0109698
UNCLASSIFIED
PROCESSING DATE--11SEP70
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